

Transformational Leader as Person-Centered Communicator: Empirical Findings and Observations for Leadership Educators

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Abstract

This article focuses on the empirical effects of cognitive differentiation and persuasive skills on transformational, transaction, and laissez-faire leadership. Subjects (N = 294) completed measures of independent and dependent variables. Findings confirmed prior findings, however findings some reflected differences. Cognitive differentiation was positively related to transformation leadership ($r = .16$, $p = .038$), unrelated to transactional leadership ($r = -.02$, ns), and negatively related to laissez-faire leadership ($r = -.22$, $p = .002$). Findings were nearly identical for the persuasive skills variable showing a positive relationship with transformational leadership ($r = .19$, $p = .021$), no relationship with transactional leadership ($r = -.007$, ns), and negatively related to laissez-faire leadership ($r = -.27$, $p = .001$). In a regression analysis cognitive differentiation and persuasive skills accounted for 5.4% of the unique variance of transformation leadership ($F = 4.02$, $df = 2,139$, $p = .02$). Implications to leadership educators were discussed.

Introduction

To say that leadership and communication is linked to simply to restate what is obvious and largely proven through much of the scholarship in our discipline. What is less than clear, however, is the specific socio-cognitive elements of communication that promote effective leadership. Some might argue that the ability to develop a strategic message is sufficient, others would suggest that organized thoughts lead to better thinking, and communication is the benefactor. No matter the perspective, little empirical research on the specific mechanisms

has been completed. This article explores two specific socio-cognitive communication variables, cognitive differentiation and applied persuasive skills, in an effort to understand more about how specifically communication and transformational leadership are linked.

Transformational Leadership

The original formulation of transformational leadership theory comes from the work of James MacGregor Burns in his 1978 seminal piece, *Leadership*. At the core of transformational leadership is the concept of transformation, or change of the organization (Barge, 1994; Yukl, 1989). Tichy and Devanna (1986) suggested that the current time for change is unique and calls for unique people (transformational leaders) to impact, change, and discard the status quo methods. Burns briefly defined transformational leadership as a process in which “leaders and followers raise one another to higher levels of morality and motivation” (p. 20). A chief element of transformation, in Burns’ view, centers on the ability to grow the needs of the follower. According to Burns, focusing on the needs makes leadership accountable to the source of leadership – the follower. Burns concluded the topic of transformational leadership by advancing certain characteristics. First, transformational leadership is collective rather than focused on the leader personally. Needs beyond the growth of a leader’s power must be pursued. Second, transformational leadership is dissensual and promotes change as a rule rather than simple status quo inaction. Change emerges from conflict, consensus and consistency from dissensus. Third, transformational leadership is causative rather than reactive or inactive. The central component, the creation of change, emerges from transformation of values and morality rather than the reinforcement of the norm of transaction. Fourth, transformational leadership is morally purposeful. The ability to raise followers to a higher moral plane serves to motivate and renew rather than reinforce transactional solutions. Finally, transformational leadership is elevating. Transformation means that followers’ needs must be taken to levels beyond, there must be challenge and growth. This growth, according to Burns, must be moral growth centered on the rich enactment of personal and collective values.

Bass (1985) claimed that transactional leadership and transformational leadership, rather than being definitional opposites, are more similar than Burns had suggested. Bass’ reasoning stemmed from the fact that transactional leadership can have positive effects. Bass further theorized that transactional leadership, though immature, unrefined and mediocre, is still a foundation from which to build. Transformational leadership often grows from the basis of transactional leadership. Transactional leadership is useful to the extent that transformational leadership can grow from it. Clearly, Bass (1985, 1990) acknowledges the importance of the superior leadership method since transaction alone cannot account for the benefits associated with charismatic, innovative, and enterprising leadership. Bass (1990) detailed the specific characteristics of transformational leadership: charismatic, inspirational, individually considerate, and intellectually

stimulating. Transactional leaders are best characterized by contingent reward, management by exception in active and passive tenses, and laissez-faire behaviors. Bass reasoned that a move toward transformational leadership will make companies more productive and ultimately more economically, socially, and interpersonally successful. Tichy and Devanna (1986) defined transformation best, “Transformational leadership is about change, innovation, and entrepreneurship” (p. viii).

Zorn (1991) studied the relationship between cognitive differentiation, leadership messages, and transformational leadership. This study, one of the few looking at the relationship among leadership and cognitive complexity, strongly asserted the link between transformative leadership and differentiation. Zorn found that there was a moderate positive correlation between construct differentiation and transformational leadership ($r = .43, p < .01$), but there was no significant association between transactional or laissez-faire leadership and differentiation. Zorn reasoned that these findings were predictable given the need for transformational leaders to understand their follower’s frame of reference and that transformational leaders have more developed abilities for understanding others’ interpersonal worlds. Zorn persuasively argued, “the present findings suggest that a more differentiated construct system may be beneficial to organizational leaders” (p. 189). Zorn concluded that construct system development has much potential in explaining leadership processes and the link between the two should be studied more carefully.

The standard research instrument used to assess transformational, transactional, and laissez-faire leadership has been the Multifactor Leadership Questionnaire developed by Bass (1985). Since the original conceptualization of the MLQ there have been several editions, but the factor structure has remained consistent. The transformational factor includes independent assessments of charisma, inspiration, intellectual stimulation, and individualized consideration. The transactional factor is comprised of contingent reward and management by exception. The final factor, laissez-faire leadership, is not divided into sub-scales. Zorn and Violanti (1993) noted that the instrument includes both self-reported behavioral rating as well as a self-report of follower’s responses. The instrument has been reliably used as both a self-report of leadership attributes as well as a subordinate or peer report examining leadership. Much research has used the MLQ leadership instrument to assess levels of transformational, transactional, and laissez-faire leadership with several important findings being reported. Given the popularity and reliability of the instrument there seems to be adequate justification for its repeated use.

Constructivism and Cognitive Differentiation

Delia (1977), building on the theoretical works of O’Keefe, suggested that the general theory of importance for scholars is constructivism. Constructivism is as basic as any theory and serves as a “worldview”, paradigm or “root metaphor” for

the conduction of research on the field of communication. Delia also contended that the constructivist perspective occurs in social interaction. In constructivism, a person's understanding of others is related to impressions, images, or constructs.

Crockett (1965) examined the defining characteristics of constructs in his seminal piece on cognitive complexity and impressions based on Kelly's (1955) work on personal construct theory. Crockett suggested that a cognitive system contains a large number of elements and that those elements are arranged hierarchically by complex relational bonds. Crockett further contended that as the number of elements increases, individuals might be said to be more cognitively complex. To Crockett, constructs are stimulus-based impressions that people create and organize. Crockett inferred that the study of constructs is the study of impression formation and the substance of constructs can be assessed through the measurement of interpersonal impressions.

O'Keefe and Sypher (1981) and Delia, O'Keefe, and O'Keefe (1982) suggested that constructs are bipolar dimensions of evaluation of others. Delia, O'Keefe, and O'Keefe suggested that people organize constructs or schemes based on the similarity or difference between the new impression and other impressions. Each construct is in relative evaluation to the construct upon which it was based. O'Keefe and Sypher suggested that people erect personal construct templates through which they understand the world; people are scientist-like in their quest for understanding their world. Their templates offer a chance for understanding, predicting, and controlling events. Constructs are highly organized and serve as the fundamental basis of inferences. Constructs form the basis for human interaction and human action according to Delia et al.

A variety of variables have been examined in relation to cognitive differentiation in organization settings. In their longitudinal study of an organization, Sypher and Zorn (1986) examined the relationship between cognitive differentiation, self-monitoring, perspective-taking, and persuasive ability. Their study revealed that cognitive differentiation was related to other socio-cognitive and communication skills. Specifically, cognitive differentiation was correlated with perspective taking, self-monitoring, upward mobility, and persuasive ability. Cognitive differentiation accounted for 32% of the variance of job level. Cognitive differentiation, as they concluded, was the most significant predictor of job level and upward mobility.

Sypher and Zorn (1986) looked at several variables in relation to the content of the construct system. They found that people at higher organizational levels and upwardly mobile people had more influence constructs than less mobile or level-challenged counterparts. Content analysis of the liked coworker centered on considerate, personable, and honest person; the content surrounding the disliked coworker centered more on lack of integrity, self-centered, and insincere. Overall, the content of liked persons tended more organized (hierarchically integrated)

than assessments of disliked coworkers. Sex also played a role in the specific qualities of liked and disliked coworkers.

Research conducted by Penley, Alexander, Jernigan, and Harwood (1991) confirmed some of the Sypher and Zorn findings, but called into question others. Specifically, Penley et al. found general support for the importance of a socio-cognitive perspective in understanding organizational behaviors and motivations. However, they failed to find an effect for cognitive differentiation on the effectiveness of managers. Penley et al. claimed that increased accuracy in sending messages was positively related to the performance of a manager. Penley et al. also echoed the remark made by other constructivist researchers suggesting that communication is not a single simple variable, rather it is complex, multidimensional factor that definitely impacts people (Sypher, Bostrom, & Siebert, 1989). Penley et al. also noted methodological differences leading to the lack of significant finding.

Sypher (1990) extensively discussed the role of socio-cognitive abilities in leadership. Interpretation of social cognition and influence is central to an understanding of leadership behavior. Sypher argued that leaders act “with” people rather than acting “above” people. Furthermore, Sypher contended that leaders have the responsibility to examine the cognitions of followers. Sypher suggested “some leaders may be able to influence others, in part, because they have the ability to construe their followers in more complex, abstract, and psychologically centered ways, which enables them to produce messages that are more sensitive to the interpersonal aspects of the situations and address multiple aims and obstacles” (p. 553). Sypher also suggested that effective leaders are more able to adopt person-centered strategies because they are more cognitively differentiated than others. construct development, in Sypher’s view, is a necessary condition for effective communication, and hence, has a major impact on effective leadership.

Zorn (1991) looked at the relationship between construct system development, transformational leadership style, and leadership messages finding support for the idea that construct system development is positively related to transformational leadership. Zorn found mixed support for the relationship between leadership messages and construct system development. Zorn and Violanti (1996) further examined the relationship between construct system development, sex differences, organizational outcomes, and persuasive ability. The results of their study indicated that more differentiated individuals attained greater achievement in organizations and the sex of the participant played little role in mediating that relationship. Overall, the research by Zorn (1991) and Zorn and Violanti (1996) suggested that assessment of cognitive differentiation is important to understanding more about organizational behavior.

Constructivists have tended to focus data collection around the use of Crockett’s Role Category Questionnaire. Delia et al. (1982) concluded that free-response

measures, like the RCQ, should be employed as a standard part of research. Sypher and Sypher (1988) critically examined the RCQ as a measure of cognitive differentiation. As the basis for constructivist research, the RCQ measures quantity and organization of the cognitive impressions that people make in a free-response format. Sypher and Sypher reported high test-retest reliability (.95) and interrater reliability (.90). They further suggested that the validity of the measure is high due to its application and consistency with other measures of social cognition. The RCQ satisfies all the criteria of an effective measure of cognitive complexity and takes little training to code. Overall, the RCQ is a robust measure of social cognitive development in people generally, but also can be a predictive tool in more specific contexts like organizations.

Socio-Cognitive Persuasive Abilities

The importance of person-centered persuasive communication has been repeatedly documented in the literature. O'Keefe and Delia (1979) contended that persuasive communication is designed to elicit desired responses from listeners, and communication is based on the cognitive abilities of the communicator, or the ability to develop a position. Furthermore, the strategies that one adopts to promote a specific outcome are based, to some degree, on the person-centeredness of the message. Together these points draw one to conclude that the efficacy of persuasive messages are based on the ability to build a credible argument as well as present an argument that has specific meaning to the receiver.

Socio-cognitive persuasive studies also emerge out of the constructivist research tradition. Delia et al. (1982) contended that people develop their cognitive abilities through interaction with the world. Furthermore, people are more than simple responders, they create and act based on the world. This is the basis for construct system development. Interaction often can be associated with multiple goals and intentions. People base their strategies on the constructs that organize their world, as always there is variation in just how those strategies are implemented based on a particular construct.

Sypher and Zorn (1986) empirically reinforced the findings of prior researchers in the organizational setting. Communication competency, to Sypher and Zorn, must be grounded in theory. Constructivism offers theoretical underpinning that allows cognitive ability and persuasive ability to be easily fused together. In their longitudinal study, Sypher and Zorn found that cognitive differentiation and persuasive abilities were significantly correlated. Together as indices of communication ability (cognitive differentiation, persuasive ability, and perspective taking) they predict individual success in organizations.

Burleson and Waltman (1988) reported further support for the previous findings concerning the link between cognitive differentiation and persuasive abilities. Burleson and Waltman further indicated that cognitive abilities were generally associated with higher communication ability and specifically more successful at

attaining short and long term instrumental goals. Burleson and Waltman also suggested that cognitive complexity assist others in the interpretation, structuring, and the overall content of interactions. Burleson and Waltman's report comprehensively summarized the findings relating cognitive differentiation to persuasive ability, a mechanism further addressed later.

Applegate (1990) elaborated on the background cognitive components that relate to persuasive ability by suggesting that constructs serve a dual role: they assist in understanding others and they create more complex systems of sociality. Constructs are used to not only understand others but assist in forming sustainable social relationships with others. Applegate also echoed the findings of prior researchers' cautions about oversimplification of the relationship by suggesting that construct development is a necessary but not sufficient condition for person-centered persuasion. Applegate also discussed the relationship between regulative communication, comforting communication, identity management communication, and cognitive complexity concluding that cognitive differentiation plays a major role in each.

Like Sypher and Zorn (1986, 1988), Haas and Sypher (1990) further contended that the link between communication competence and individual job performance is important. Communication behaviors are goal directed having multiple objectives, both personal and social. In their empirical analysis, Haas and Sypher again found support for the idea that cognitive differentiation and persuasive ability (number of arguments, and quality of arguments) were closely related. Cognitive differentiation and persuasive abilities were also highly correlated to organizational and individual outcomes. Furthermore, the link between cognitive differentiation and persuasive messages was even more pronounced when situations called for a stronger persuasive appeal, as promotion or performance evaluation situations would seem to require.

Sypher (1990) summarized the link between persuasive ability, cognitive differentiation, and organizational indicators in her essay on the importance of socio-cognitive abilities in leadership. Examination of socio-cognitive elements and organizational performance lead to questions of leadership. Sypher reported that leadership ability and person-centered messages have been linked in the literature. Those individuals that are more persuasive are upwardly mobile and locate in higher organizational positions. Sypher claimed overall that leaders who adopt a person-centered strategy, and hence meet multiple goals in various social situations, are more effective.

Zorn (1991) focused his research on the relationship between constructs, leadership, and persuasive ability. The relationship between person-centered persuasive messages and transformational leadership approached significance, but no relationship was found for transactional leadership. Zorn concluded that leadership abilities, specifically, transformational leadership abilities, are closely associated with socio-cognitive abilities and a more differentiated construct

system may help produce more person-centered communication and a resulting effect in leadership. Zorn and Violanti (1992) were not able to find significant associations between performance measures and persuasive ability.

As originally developed, the persuasive task of O'Keefe and Delia (1979) asked respondents to create a persuasive message presenting a case to a wealthy politically savvy man, Tex Greenbucks, to support a poverty stricken small tribe in the Pacific called the Barrakus. Coding of the Tex Greenbucks story was then conducted on the basis of a hierarchal coding scheme (Burlison, 1987; O'Keefe & Delia, 1979; Zorn & Violanti, 1992) of argument quality and quantity. Various researchers have adapted various elements of the coding scheme. The Tex Greenbucks story has been changed to a story more ecologically valid in the specific organizational context (Haas & Sypher, 1990). Furthermore, the coding scheme used to analyze the persuasive task has evolved as well. Instead of counting the number of arguments attempts have been made to assess the person-centeredness of the message (Sypher, Bostrom, & Siebert, 1989; Sypher & Zorn, 1986). For example, O'Keefe et al. (1989) assessed the persuasiveness of content based on a four-point scheme while Haas and Sypher (1990) used an assessment of both the quality and the number of strategies used. Zorn and Violanti (1992) analyzed the person-centeredness of the message via a ten-category scale rather than examine the number of arguments. The findings are generally consistent across the variety of methods employed, there is correlation with cognitive differentiation. This correlation tends to validate the adaptability of the coding scheme. Reliability assessment of each of the methods used is notably strong, generally intercoder agreements are greater than .90, strong evidence as to the strength and resiliency of the method.

Research Rationale and Hypothesis Development

Even though the primary focus of this research centers on the socio-cognitive components of transformational leadership, an examination of the interrelationships between socio-cognitive elements seems justified. Finding alternative samples to replicate findings is always of scientific merit, especially when some studies do not support the relationship between the elements (Zorn, 1991). Clearly, the literature and empirical evidence on cognitive differentiation and persuasive abilities support the close link between the two variables. Research by Delia, Clark, O'Keefe, and Sypher has demonstrated the strong effect that construct differentiation has on the ability to create person-centered persuasive messages. However, further examination of the relationship in alternative contexts can help give more support to the already verified relationship.

H1: Cognitive differentiation will be positively related to persuasive ability.

As is the case with persuasive abilities and cognitive differentiation, the need to look at alternative samples to further investigate the relationship between cognitive differentiation and leadership attributes seems justified. Research by

Howell and Higgins (1990) also illustrated the relationship to a degree. Barker (1994) suggested that transformation has its basis in influence and social interaction, which has been linked repeatedly to cognitive differentiation. The work by Sypher (1990) and Zorn (1991) also provide adequate foundation for the relationship between transformational leadership and cognitive differentiation. However, these findings need further empirical support in other field samples to verify the relationship and examine any subtle relationships that may emerge.

H2A: Cognitive differentiation will be positively related to transformational leadership.

H2B: Cognitive differentiation will not be related to transactional leadership.

H2C: Cognitive differentiation will not be related to laissez-faire leadership.

The relationship between persuasive abilities and leadership has been examined extensively as well. The work of Sypher (1990) and Zorn (1991) give leadership a socio-cognitive aspect. Other early research in transformational and transactional leadership by Burns (1978) and Bass (1985) indicated that the ability to inspire and share meanings about vision, change, and alternatives is central to the mission of the transformational leader. Likewise, the transactional leader must be able to use communication abilities to effectively exchange rewards and sanctions with followers. DuBrin (1995) also contended that effective transformational leaders must be masterful communicators. Research specific to transformational leadership and persuasion has not found the expected link however (Zorn, 1991). Sufficient evidence exists to warrant further study of the relationship between transformational, transactional, and laissez-faire leadership and persuasive abilities.

H3A: Persuasive ability will be positively related to transformational leadership.

H3B: Persuasive ability will not be related to transactional leadership.

H3C: Persuasive ability will not be related to laissez-faire leadership.

In addition to the simple effects relating the four main variables under consideration, there is likelihood that there will be interactive effects. Given the prior strong relationship between cognitive differentiation and persuasive ability there is some likelihood that they will relate to person-centered leadership. Furthermore, since the ability to innovate is based on both elements there is also reason to expect that all three variables will relate to leadership.

H4: Cognitive differentiation and persuasive ability will predict person-centered leadership.

Methods

The research undertaken is focused on assessment of innovation, cognitive differentiation, persuasive ability, and transformational leadership in order to find relevant relationships. This research is quasi-experimental in nature and conducted in five different organizational settings.

Subjects

Subjects (N = 294) from the study came from five different organizational sources. Organizations were picked based on their primary missions: an educational institution, a hospital/clinic, a manufacturing organization, automobile sales and service company, and a utility. The utility, manufacturing, and medical facility received a full census sampling of all departments and personnel. The educational institution had a full sampling of staff members and several classes were polled as well. The automobile sales organization was based on a sample of approximately 50% of the total staff as determined by the researcher and the automobile liaison.

All subjects were given a survey battery containing the elements discussed in the instruments section. Each subject was appropriately trained in completing the instrument and debriefed about the results collected from the instrument. Each subject was given a statement of consent detailing the risk involved, the voluntary nature of the assignment, the approvals granted, and other obligatory information.

Procedure

Once the subjects were selected the survey battery was administered either personally or in small group sessions. Subjects were informed about the experimental nature of the instrument and informed consent was acquired from every subject. Subjects were also informed that their responses will be anonymous and that results of the survey will be released in mass to the organization upon completion of the project. Training and simple directions were given for each section of the instrument. Subjects were also instructed to answer every question as completely as possible. Subjects were given ample organizational time to perform the instrument, approximately 30 to 45 minutes.

Upon completion of the instrument, subjects that desired it were debriefed about the study and their contribution to the study. Subjects were also given an opportunity to ask specific questions about the research during this period as well as well as given a telephone number to reach the primary researcher if questions arose. Subjects were informed that they should not talk to other potential subjects about the specifics of the survey or about the research hypothesis so as to avoid unnecessary bias of the subject pool.

Instrumentation

The first portion of the assessment battery is the Role Category Questionnaire as reported by Crockett (1965) and Bursleson (1986). As is consistent with prior research regarding ecologically valid versions by Bursleson (1986) and Sypher and Zorn (1986), the RCQ was revised to examine the constructs about people who are seen as technologically innovative and those not technologically innovative. The RCQ has been demonstrated to have exceptionally high intercoder agreement and test-retest reliability. Given the simple nature of the instrument and its widespread application to measurement of interpersonal constructs, there is every indication that the RCQ is a valid measure of construct differentiation. Coding of the RCQ was done according to the Crockett et al. (1974) guidelines. Following a brief training session, two independent coders had over 95% agreement on a limited sample of 20. Spot checks were randomly done throughout the training process to ensure continued reliability. There was intercoder agreement of 96% for the RCQs that were examined for reliability. That level of agreement was deemed as sufficiently reliable.

The second instrument, the Multifactor Leadership Questionnaire (Version 5-S) created by Bass, is a 70 item survey consisting of four scales of transformational leadership acts, two scales of transactional leadership acts, and one scale measuring laissez-faire leadership. Subjects self-reported specific leadership attributes based on a five-point Likert scale ranging from strongly agree to strongly disagree. The MLQ has been found to be very reliable (Howell & Higgins, 1990; Seltzer et al., 1987; Zorn, 1991) as both a self-report measure or as a measure of a superior's performance. In the present application the MLQ was used as a self-report of transformational, transactional, and laissez-faire leadership attributes. Following administration of the MLQ-5S an assessment of the overall reliability was performed showing the measure reliable ($\alpha = .89$) consistent with prior research. The sub-scale reliability ranged from $\alpha = .89$ to a lower reliability of $\alpha = .60$. Analysis based on the subscales was deemed appropriate given the much higher alpha reliabilities generated in prior research.

The final measure used in the survey battery consisted of a persuasive task like those developed by the Delia and O'Keefe research. Haas and Sypher (1990) found that the use of an ecologically valid persuasive task was just as effective and reliable as the original persuasive task that was developed. Thus, a persuasive task was developed around a fictional manager of a facility that needed to be persuaded to adopt a training program. Respondents were asked to write a letter to the manager to persuade him to adopt the training program that the subject and a coworker developed. The persuasive task was judged on the basis of criterion derived from several sources of research that have used the persuasive task (O'Keefe & Delia, 1979; O'Keefe et al., 1989; Sypher & Zorn, 1986). Five distinct categories were developed based on three aspects: perspective taking, argument quantity, and argument quality. Following training based on the coding scheme a random sample of ten persuasive tasks revealed an intercoder reliability

of .90, deemed reliable for this research. Random checks were performed throughout the sample with similar results.

Coding and Data Analysis

Each instrument was coded in an appropriate manner. The RCQ was coded using standard procedures developed by Crockett et al. (1974). All constructs were added for each of the two sections then summed for a total index of differentiation. Three categories of construct differentiation (high/medium/low) were created based on the relative number of constructs that subjects generated. High level of differentiation was reserved for those subjects with more than 22 constructs, low differentiation was reserved for those subjects with less than 14, and medium was for those individuals in between. The categories were based on a percentile analysis of the overall sample with cut points at the 33rdile and 66thile in an effort to get nearly equal sized groups. Thus, there is both a continuous and discrete measure of construct differentiation. The MLQ-5S was tabulated and the seven subscales were computed based on Bass' coding schematic. The relevant subscales were also summed and divided by the number of subscales to determine an individual index for transformational and transactional leadership. No reversed scores were written into the MLQ. The persuasive task was content analyzed based on the criterion elaborated above.

Results

Initially, descriptive statistics will be reported for each individual variable. Results will be discussed in the order of the individual hypotheses.

Descriptive Statistics

Table 1 shows the results from computation of descriptive statistics for each computed variable. Mean, standard deviation, range, minimum, maximum, and valid number of responses were calculated for 12 variables emerging from the three measures.

Table 1. Descriptive statistics for selected variables.

Variable	Mean	St. Dev.	Range	Min	Max	Valid N
RCQ Categorical	1.93	.823	2.00	1.00	3.00	237
RCQ Total	19.44	8.17	42.00	4.00	46.00	237
Transformational	3.63	.38	2.75	2.20	4.95	202
Transactional	3.20	.34	2.75	2.10	4.85	195
Inspiration Subscale	3.21	.47	3.14	1.86	5.00	232
Charisma Subscale	3.63	.47	3.00	2.00	5.00	228

Intellectual Stimulation Subscale	3.74	.43	2.80	2.20	5.00	233
Indiv. Consideration Subscale	3.89	.41	2.90	2.10	5.00	234
Contingent Reward Subscale	3.47	.47	2.90	2.10	5.00	198
Management by Exception Subscale	2.93	.42	3.20	1.60	4.80	230
Laissez-faire Subscale	2.15	.52	3.80	1.10	4.90	237
Persuasive Task	3.09	.94	4.00	1.00	5.00	207

Cognitive Differentiation and Persuasive Ability

A correlation was computed examining the relationship between cognitive differentiation and persuasive ability. The results clearly showed a moderate correlation of $r = .33$ between the two variables ($p = .001$). For the categorical variable the correlation was less strong, $r = .27$, but still probable at the $p = .001$ level. Further ANOVA analysis was performed to determine the specific effect. The results demonstrated again that cognitive differentiation has a substantial effect on persuasive abilities ($F = 8.25$; $df = 2, 199$; $p = .0004$). Higher differentiated individuals had greater persuasive ability than medium and lower differentiated individuals. A regression analysis was also performed finding that a substantial 10.9% of the variance was accounted for by cognitive differentiation of the respondent ($F = 24.45$; $df = 1, 200$; $p = .0001$). In light of these findings H1 is supported and should be retained, consistent with some prior research in the field.

Cognitive Differentiation and Leadership Abilities

Correlations between the continuous and discrete cognitive differentiation measures and transformational leadership, transactional leadership, laissez-faire leadership, and component subscales were computed and are reported in Table 2.

Table 2. Correlations for cognitive differentiation and leadership ability measures.

Leadership Measure	RCQ Continuous	RCQ Discrete
Transformational	* $r = .16$, $p = .038$	* $r = .16$, $p = .039$
Charisma-Transformational	$r = .12$, $p = .102$	$r = .11$, $p = .114$
Individual Consideration-Transformational	* $r = .19$, $p = .007$	* $r = .20$, $p = .004$
Intellectual Stimulation-Transformational	$r = .11$, $p = .135$	* $r = .15$, $p = .041$

Inspirational-Transformational	$r = .07, p = .302$	$r = .06, p = .365$
Transactional	$r = -.02, p = .749$	$r = .01, p = .889$
Management by Exception-Transactional	$r = -.13, p = .064$	$r = -.10, p = .151$
Contingent Reward-Transactional	$r = .08, p = .277$	$r = .10, p = .207$
Laissez-faire	* $r = -.22, p = .002$	* $r = -.15, p = .032$

A regression analysis was performed to determine the variance contributed by cognitive differentiation. For transactional leadership ($F = .10$; $df = 1, 162$; ns) the variance was minimal and not significant as the correlation also indicated. However, for laissez-faire ($F = 9.84$; $df = 1, 196$; $p = .002$) and for transformational leadership ($F = 4.36$; $df = 1, 167$; $p = .038$) the variance shared was significant. Cognitive differentiation accounted for almost 5% of the variance of laissez-faire leadership and almost 3% of the variance for transformational leadership, both significant in the model. ANOVAs were calculated to determine where the main differences existed. Results showed that no groups differed significantly for laissez-faire leadership ($F = 2.43$; ns). For transformational leadership, however, the overall model was significant ($F = 3.99$; $df = 2, 166$; $p = .020$) and the high differentiation group differed significantly from the medium differentiation group. In light of these results H3 should be retained given that transformational leadership abilities are generally considered to be person-centered rather than position-centered. Furthermore, given the positive relationship between cognitive differentiation and transformational leadership H2A should also be retained. H2B and H2C should be retained as well since no significant positive relationship between transactional and laissez-faire leadership existed. In fact, for laissez-faire leadership the relationship was negative.

Persuasive Ability and Leadership

Table 3 displays the correlation analysis between persuasive ability and the various measures and subscales of leadership.

Table 3. Correlations for persuasive ability and leadership ability.

Leadership Variable	Correlation with Persuasive Ability
Transformational	* $r = .19, p = .021$
Charisma	* $r = .17, p = .027$
Individual Consideration	* $r = .20, p = .008$
Inspiration	$r = .06, p = .465$
Intellectual Stimulation	$r = .10, p = .177$

Transactional	$r = -.007; p = .938$
Management by Exception	$r = -.13; p = .091$
Contingent Reward	$r = .10; p = .235$
Laissez-faire	* $r = -.27; p = .000$

A regression analysis including the criterion variables of transformational leadership and persuasive ability showed that 3.5% of the variance was accounted for by persuasive ability ($F = 5.47; df = 1, 142; p = .021$). The transactional model accounted for a non-significant amount of variance. However, the persuasive ability of the subject strongly predicted laissez-faire leadership by accounting for 7% of the variance ($F = 13.35; df = 1, 172; p = .0003$). Results of ANOVA analysis revealed that transactional leadership did not differ by persuasive ability ($F = .58; df = 4, 137; p = .674$). Transformational leadership also did not significantly differ by persuasive ability ($F = 2.03; df = 4, 139; p = .093$), but the least persuasive group was significantly lower than the most persuasive group in their amount of transformational leadership qualities. In terms of laissez-faire leadership, the overall model showed significant differences between levels of persuasive ability ($F = 3.41; df = 4, 169; p = .01$), and laissez-faire leadership levels were significantly higher for those individuals with less persuasive ability. These results give clear support for H3A since persuasive ability is a significant predictor of transformational leadership. This finding suggests that persuasive ability and person-centered leadership are related. Support for H3B and H3C also seems justified given the fact that only transformational leadership was significantly and positively related to persuasive abilities, transactional leadership was not related at all, and laissez-faire leadership was strongly negatively related.

Interactive Effects Between Cognitive Differentiation, Persuasive Ability, and Leadership Ability

In a regression analysis cognitive differentiation and persuasive ability were regressed against transformational leadership finding a significant result ($F = 4.02; df = 2, 139; p = .020$). This equation accounted for 5.4% of the variance of transformational leadership. For laissez-faire leadership, cognitive differentiation and persuasive ability were significant predictors ($F = 7.56; df = 2, 168; p = .0007$) and accounted for 8.3% of the variance, supporting H4. In a MANOVA analysis there was no significant interactive effect between cognitive differentiation and persuasive ability for transformational, transactional, and laissez-faire leadership abilities.

Discussion

Understanding the simple numerical relationships, though important, is not sufficient for building theory about a socio-cognitive basis for leadership. The relationship between socio-cognitive abilities (cognitive differentiation and

persuasive ability) has been clearly documented. What has lacked in the research, however, is the relationship between these variables and leadership. Findings of this research project clearly suggest some relationship among these elements. As was consistent with prior research, there was a significant positive correlation between cognitive differentiation and persuasive ability. This finding although more a replication than exploratory one, is important to understanding the fuller effects of innovation. Sypher and others have explicated the mechanism behind this relationship. Basically, the ability to generate relevant cognitions helps a person create a more effective person-centered argument. This works in at least two different ways. First, cognitive differentiation helps people organize content. People with more differentiated schemes have processed and organized information making retrieval easier. The creation of a plausible argument must be based, at least in part, on the ability to retrieve information. Differentiation can also provide a qualitatively richer argument as well. A person has the ability to create constructs and to hierarchically arrange those constructs; differentiation is reported to measure both aspects, though quantity of constructs is the primary method of measure. The quality of the argument comes from the choices people make in sorting through the most important content to present in an argument.

Second, cognitive differentiation also helps a person create a better argument through the creation of a person-centered message. This is a more specific mechanism than described above. Constructs are obviously organized around content, but the content serves as the backdrop to the creation of person-centered argument. The constructs serve as information from which a person can draw the most appropriate personal information for the outcome that they want. The criterion here is based more on what targets want to hear, as opposed to the information that they need to put in for a credible argument.

This research offers more support for this relationship in organizational contexts. Some research did not find a clear link between persuasion and cognitive differentiation. This research found that 11% of the variance of persuasive ability was explained by cognitive differentiation. O'Keefe and others have advanced other theories that mediate the relationship between the two variables, and this research was not designed to disprove those findings.

The role of socio-cognitive skills in leadership has been well documented in the literature. Sypher (1990) and Zorn (1991) have thoroughly examined the relationship finding that leadership and cognitive differentiation are theoretically and empirically linked. The same finding would hold true for persuasive ability and leadership as well (Zorn, 1991). The current research served as replication and extension to the extent a large sample of varied organizational members was used. The current findings echo the conclusions of Sypher and Zorn on this question.

Specifically, there was a significant relationship found between cognitive differentiation and transformational leadership as hypothesized. Further

exploration showed that cognitive differentiation accounted for a significant 3% of the variance of transformational leadership. These findings make sense given prior findings, but are also plausible considering the nature of transformational leadership. Transformational leaders must be highly motivated to connect with others. This personal connection (charisma, passion, vision, empowerment, etc.) could be impacted by the lack of ability to create common meanings and shared perspectives with others. Cognitive differentiation is one attribute that allows a person to generate relevant person-centered communication based on the elaborate constructs that a more differentiated person can create. Thus, one could reason that the mechanism through which transformational leadership is impacted by cognitive differentiation is through the creation of personal messages.

Analysis of the relationship between transformational leadership and persuasive ability turned up several significant results. Specifically, transformational leadership and two of the four subscales (charisma, individual consideration) were correlated with persuasive ability. In fact, persuasive ability accounted for 3.5% of the variance of transformational leadership. Those individuals with more persuasive ability were more likely to score higher on transformational leadership just as those individuals that were more differentiated were more likely to be transformational. The combined model of cognitive differentiation and persuasive ability accounted for over 5% of the variance of transformational leadership. There can be no doubt that the ability to create a person-centered message has an added effect beyond that of being differentiated. This suggests that the variance comes not just from the ability to create person relevant constructs, but the actual creation of person-centered messages that makes an impact. Sypher's point bears repetition here, "some leaders may be able to influence others, in part, because they have the ability to construe their followers in more complex, abstract, and psychologically centered ways, which enables them to produce messages that are more sensitive to the interpersonal aspects of the situations and address multiple aims and obstacles" (Sypher, 1990, p. 553).

Transactional leadership was not correlated significantly with cognitive differentiation or persuasive ability. Transactional leaders have no need for advanced socio-cognitive skills because they simply act to transfer rewards and sanctions for employee behavior. There is minimal consideration of personal aspects under this form of leadership. These results are consistent with those of Zorn and support Bass' and Burns' theories that suggest transactional leadership is an immature, though viable, form of leadership.

In terms of the socio-cognitive aspect of laissez-faire leadership, statistical evidence suggests that laissez-faire leadership is mediated by the cognitive and persuasive skills of the subject. In an analysis of the relationship between cognitive differentiation and laissez-faire leadership about 5% of the variance was accounted for. In the persuasive ability regression model 7% of the laissez-faire leadership variance was accounted for. The combination of the two variables accounted for 8.5% of the variance of laissez-faire leadership. These findings

make sense in light of the actual underlying leadership style of the laissez-faire person. The laissez-faire leader is not concerned with the productive well being of the follower. The laissez-faire person is simply interested in staying out of trouble and avoiding change or personal development. Those individuals higher in laissez-faire leadership are generally less secure in their employment and their own duties than even the transactional leader.

Implications for Leadership Educators

These findings offer a couple of implications for leadership educators. Initially, as with any other discipline, leadership educators might have some tendency to become locked into in the discipline. Cross-disciplinary research suggests that there are few fields that are genuinely isolated, and that any scholar of a social or behavioral science (like leadership studies) should have some basis of knowledge in other social and behavioral sciences. These findings directly support the need for us to know more and for our students to learn more about how leadership interacts with other social science disciplines. In this study the inference is clear and that is that communication abilities determine the type of leadership you exhibit. Subjects with persuasive abilities and exhibiting cognitive differentiation are more likely to be transformational. Subjects lacking those qualities are likely to shrink away from leadership responsibilities.

While every discipline fights to keep its “academic pedigree” by teaching only its subject, it may serve leadership educators well to understand that leadership is based on a set of flexible behaviors that may have been borrowed from other academic areas. For many years, leadership programs housed in business schools have relied heavily on business core curriculum to inform their students. Other colleges have similar requirements based on their mission. While leadership educators must maintain their distinctiveness, they must accept the notion that leadership is not an impenetrable monolith. Interdisciplinary research can help change this perception.

A second implication emerging from this research suggests that more research looking at specific communication abilities needs to be done. While a few communication-related variables have been explored in light of transformational leadership, such as listening in Sypher, Bostrom, and Seibert, 1989, more diverse areas need to be investigated. This call for research specifically relates to leadership educators in as much as we have the need to expand the bounds of our field and we have the requisite content expertise. Communication apprehensiveness has long been a bellwether variable of competency, and linking transformational leadership ability to communication apprehension would make sense.

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